

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE		Page of Pages 1 23		
2. AMENDMENT/MODIFICATION NO. Amendment No. 002		3. EFFECTIVE DATE 4/29/98		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
6. ISSUED BY Bureau of Reclamation Lower Colorado Region P.O. Box 61470 Boulder City NV 89006-1470		CODE LC-3113		7. ADMINISTERED BY (If other than Item 6)		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and ZIP code)				(✓)		9A. AMENDMENT OF SOLICITATION NO. 98-SI-30-12330	
				X		9B. DATED (SEE ITEM 11) April 14, 1998	
						10A. MODIFICATION OF CONTRACT/ORDER NO.	
						10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE					

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [] is extended, [**X**] is not extended.

Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
(a) By completing Items 8 and 15, and returning __ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (if required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(✓)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. **IMPORTANT:** Contractor [] is not, [] is required to sign and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

Project Title: Upgrading Mechanical Equipment - Central Section, Hoover Powerplant, Boulder Canyon Project, Arizona-Nevada

Purpose of Amendment: The purpose of this amendment to make revisions and/or corrections to (1) Section B, (2) Section H, (3) Section L, and (4) the Specifications located under Attachment No. 1 and to incorporate an additional drawing.

Receipt of Bids: The date for receipt of bids remains May 14, 1998 at 2 p.m., local time. The place for receipt of bids remains the Bureau of Reclamation, Lower Colorado Regional Office, Annex Building, Room AA-123, Nevada Hwy and Park Street, Boulder City, Nevada.

(Continue on following page(s))

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (TYPE OR PRINT)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR		16B. UNITED STATES OF AMERICA	
15C. DATE SIGNED		16C. DATE SIGNED	
_____ (Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)	

NSN 7540-01-152-8070
PREVIOUS EDITION UNUSABLE

30-105

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

Description of Changes:

1. In Section B, remove pages B-1 and B-2 and replace with the attached revised pages B-1 and B-2. This revises the estimated quantity in Item 5 from 2,500 pounds to 1,900 pounds.
2. In Section H, remove pages H-7 through H-11 and replace with the attached revised pages H-7 through H-11. This revises Reclamation clause WBR 1452.211-81 Effective Dates of Referenced Specifications and Standards to incorporate the additional specifications and standards referenced in new paragraph 4.2.1 of the specifications located as Attachment No. 1.
3. In Section L, remove pages L-5 and L-6 and replace with the attached revised pages L-5 and L-6. This corrects the telephone number for Don Bader in paragraph L.7, 52.236-27 Site Visit (Construction).
4. In Attachment No. 1,
 - a. Remove the pages i and ii and replace with the attached revised pages i and ii. This incorporates the addition of the new section 4.2 Fabricated Metalwork and paragraph 4.2.1 Miscellaneous Metalwork into the Table of Contents.
 - b. Remove page 4-5 of the specifications and replace with the attached revised pages 4-5 through 4-7. This incorporates the new Section 4.2 Fabricated Metalwork into the solicitation.
 - c. Remove Section 7 in its entirety and replace with the attached revised Section 7. This incorporates new Drawing No. 45-D-14229 into the list of drawings identified in Section 7 of the specifications.
5. In Attachment No. 5, attached Drawing No. 45-D-14229 is hereby incorporated into the solicitation for informational purposes.
6. The following question posed and is hereby responded to by this amendment.

Q. What work is included in Bid Item 2?

A. Potential bidders should refer to paragraph 2.1.1 for this information.

Acknowledgement: See block 11 above regarding how to acknowledge this amendment. The acknowledgement must be received at the place designated for receipt of offers (see block 8 of the "Solicitation, Offer, and Award," Standard Form 1442).

Bid Modification: See block 11 above if you have submitted your bid and now desire to modify it or withdraw it.

SECTION B - SUPPLIES OR SERVICES AND PRICES

B.1 WBR 1452.214-910 THE REQUIREMENTS--BUREAU OF RECLAMATION-- LOWER COLORADO REGION (NOV 1996)

(a) The Contractor shall furnish the items identified in this Section, in accordance with the terms, conditions, and specifications contained in the contract.

(b) Bidders are cautioned to carefully review the bid submission requirements contained in Section L. Failure to comply with these requirements may result in a bid being declared nonresponsive.

(c) Bids will be considered for award on the total of the schedule in paragraph B.2, but no bid will be considered for award for only a part of the schedule. Bids for only a part of the schedule will be considered nonresponsive and will be rejected.

(d) The quantities stated in the schedule(s), other than those identified as "lump sum," are estimated quantities for comparison of bids, and except as provided in the clause "Variation in Estimated Quantity," no claim shall be made against the Government for variations in the quantities stated.

(e) The Section H clause entitled "Payment for Mobilization and Preparatory Work" applies to schedule item(s) for Mobilization and Preparatory Work.

(f) Bidders are advised to carefully read paragraph (d) of the FAR clause 52.214-19 regarding materially unbalancing of bids.

B.2 THE SCHEDULE

SCHEDULE

Item	Work or Material	Quantity and Unit	Unit Price	Amount
1	Mobilization and preparatory work	For the lump sum of		\$
2	Removing and disposing of existing materials	For the lump sum of		\$
3	Unwatering sump	For the lump sum of		\$
4	Furnishing and erecting structural steel	For the lump sum of		\$
5	Furnishing and installing new miscellaneous metalwork	1,900 lb	\$	\$
6	Removing and disposing of the existing jet pumps and eductors and associated equipment	For the lump sum of		\$
7	Furnishing and installing piping, valves and eductors	For the lump sum of		\$
8	Dismantling, cleaning and repairing valves	For the lump sum of		\$
TOTAL FOR SCHEDULE				\$

**B.3 WBR 1452-214.908 BIDDING SCHEDULE COMPLETION INSTRUCTIONS--BUREAU
OF RECLAMATION--LOWER COLORADO REGION (NOV 1996)**

NOTE OF CAUTION TO BIDDERS: When completing the bid schedule, the price entered in the "Amount" column shall be the mathematical product of the quantity multiplied by the unit price. Rounding up or down is not permitted. If a price entered in the "Amount" column has been rounded, the Contracting Officer will correct such amount, pursuant to the bid preparation provision(s) in Section L for the purposes of determining the apparent low bidder, and any such corrections will appear on the contract award document.

No. 11	Brand Name Specified	Manufacturer:	Sherwin Williams 101 Prospect Avenue, N.W. Cleveland OH 44115 (216) 566-2000
		Make/Model/Catalog#:	Corothane I -Coal Tar, (B65BQ11)
		Paragraph:	6.1.2.b (2) Coatings categories classes
No. 12	Brand Name Specified	Manufacturer:	Devoe Coatings 4000 Dupont Circle Louisille KY 40207 (502) 897-9861
		Make/Model/Catalog#:	Bar-Rust 236
		Paragraph:	6.1.2.b (2) Coatings categories classes
No. 13	Brand Name Specified	Manufacturer:	Wasser High-Tech Coatings 8401 S. 228th, Building 103 Kent WA 98032 (206) 850-2967
		Make/Model/Catalog#:	MC-Aluminum, topcoat
		Paragraph:	6.1.2.b (2) Coatings categories classes
No. 14	Brand Name Specified	Manufacturer:	Sherwin Williams 101 Prospect Avenue, N.W. Cleveland OH 44115 (216) 566-2000
		Make/Model/Catalog#:	Corothane I - Aluminum (B65SQ12), topcoat
		Paragraph:	6.1.2.b (2) Coatings categories classes

H.5 WBR 1452.211-81 EFFECTIVE DATES OF REFERENCED SPECIFICATIONS AND STANDARDS--BUREAU OF RECLAMATION (SEP 1997)

Materials, contractor design, construction work, and other requirements which are specified by reference to Federal Specifications, Federal Standards, or other standards, specifications, or codes shall be in compliance with the edition or revision date cited below.

Specification/Standard	Title	Date of Latest Edition
AISC	Manual of Steel Construction - Allowable Stress Design.	1995, 9th Edition
AISC	Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings	1995, 9th Edition
ANSI/ASME B1.1	Unified Inch Screw Threads (UN and UNR Thread Form)	1989
ANSI B16.1	Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800 (includes revision service)	1989
ANSI B16.5	Pipe Flanges and Flanged Fittings (includes revision service)	1996
ANSI B16.9	Factory-Made Wrought Steel Buttwelding Fittings (includes revision service)	1993
ANSI B16.20	Metallic Gaskets for Pipe Flanges D Ring Joint, Spiral Wounds and Jacketed	1993
ANSI/ASME B1.20.1	Title: Pipe Threads, General Purpose (Inch)	1983 (Rev 1992)
ANSI D6.1	Manual on Uniform Traffic Control Devices for Streets and Highways.	1978
ANSI/UL 347	High-Voltage Industrial Control Equipment	1995
ASME	Boiler and Pressure Vessel Code	1995
ASME B40.1	Gauges D Pressure Indicating Dial Type D Elastic Element	1991
ASTM A 36	Carbon Structural Steel	1996
ASTM A 53	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless	1996
ASTM A 167	Stainless and Heat-Resisting Chromium- Nickel Steel Plate, Sheet, and Strip	1996
ASTM A 283	Low and Intermediate Tensile Strength Carbon Steel Plates	1993, Suppl a.
ASTM A 307	Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength	1994

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Specification/Standard	Title	Date of Latest Edition
ASTM A 312	Seamless and Welded Austenitic Stainless Steel Pipes	1995, Suppl a., Edition 1
ASTM A 325	Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength	1996
ASTM A 380	Cleaning, Descaling, and Passivation of Stainless Steel Parts, Equipment, and Systems	1996
ASTM A 403	Wrought Austenitic Stainless Steel Piping Fittings	1996
ASTM A 563	Carbon and Alloy Steel Nuts	1994
ASTM A 743	Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application	1995
ASTM A 744	Castings, Iron-Chromium-Nickel, Corrosion Resistant, for Severe Service	1996
ASTM A 786	Rolled Steel Floor Plates	1993
ASTM B 148	Aluminum-Bronze Sand Castings	1993, Supp a.
ASTM C 33	Concrete Aggregates	1993
ASTM C 94	Ready-Mixed Concrete	1996
ASTM C 150	Portland Cement	1996
ASTM C 181	Workability Index of Fireclay and High-Alumina Plastic Refractories	1991
ASTM C 881	Epoxy-Resin-Base Bonding Systems for Concrete	1990
ASTM C 1107	Packaged Dry, Hydraulic-Cement Grout (Nonshrink)	1991, Suppl a.
ASTM D 522	Mandrel Bend Test of Attached Organic Coatings	1993, Suppl a.
ASTM D 870	Testing Water Resistance of Coatings Using Water Immersion	1992
ASTM D 1141	Substitute Ocean Water	1990, 1992 Edition 1
ASTM D 2244	Calculation of Color Differences From Instrumentally Measured Color Coordinates	1993
ASTM D 2310	Machine-Made "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe	1991
ASTM D 2794	Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)	1993
ASTM D 3359	Measuring Adhesion by Tape Test	1995, Suppl a.

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Specification/Standard	Title	Date of Latest Edition
ASTM D 3363	Film Hardness by Pencil Test	1992, Suppl a.
ASTM D 4024	Machine Made "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Flanges	1994
ASTM D 4060	Abrasion Resistance of Organic Coatings by the Taber Abraser	1995
ASTM D 4214	89 Evaluating the Degree of Chalking of Exterior Paint Films	1989
ASTM D 4541	Abrasion Resistance of Organic Coatings by the Taber Abraser	1995, Edition 1
ASTM D 4587	Conducting Tests on Paint and Related Coatings and Materials Using a Fluorescent UV-Condensation Light- and Water-Exposure Apparatus	1991
ASTM F 436	Hardened Steel Washers	1993
ASTM F 593	Stainless Steel Bolts, Hex Cap Screws, and Studs	1995
ASTM F 594	Stainless Steel Nuts	1991
ASTM F 844	Washers, Steel, Plain (Flat), Unhardened for General Use	1990
ASTM G 8	Cathodic Disbonding of Pipeline Coatings	1990
ASTM G 14	Impact Resistance of Pipeline Coatings (Falling Weight Test)	1988
ASTM G 42	Cathodic Disbonding of Pipeline Coatings Subjected to Elevated Temperatures	1990
ASTM G 53	Operating Light- and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Nonmetallic Materials	1996
ASTM G 95	Cathodic Disbondment Test of Pipeline Coatings (Attached Cell Method)	1987, 1992 Edition 1
AWS A2.0	Welding Symbols	1993
AWS A3.0	Standard Welding Terms and Definitions	1994
AWS D1.1	Structural Welding Code-Steel	1996
AWWA C200	Steel Water Pipe	1996
AWWA C206	Field Welding of Steel Water Pipe	1991
AWWA C500	Metal Seated Gate Valves for Water Supply Service	1993, Addendum a.
AWWA C504	Rubber Seated Butterfly Valves	1994

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Specification/Standard	Title	Date of Latest Edition
AWWA C507	Ball Valves 64-inch through 48-inch	1991
AWWA C540	Power Actuating Devices for Valves, Sluice Gates	1993
Commerical Item Description A-A-1923A	Shield Expansion (Lag, Machine and Externally Threaded Wedge Bolt Anchors) - 5340 - IS	7/18/95
Fed Spec FF-S-85	Screw Cap Slatted and Hexagon Head	5/5/69, Amd #3
Fed Spec WW-P-521	Pipe Fittings, Flange Fittings, and Flanges, Steel and Malleable Iron (Threaded and Butt Welding) Class 150	March 1990
Fed Standard No. 313	Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities	1996
Fed Standard No. 595	Colors Used in Government Procurement	July 1994
MSS SP-110	Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends	1996
NACE No. 2	Near-White Metal Blast Cleaning (SSPC-SP 10)	1994
NACE No. 3	Commercial Blast Cleaning (SSPC-SP 6)	1994
SSPC-SP3	Power Tool Cleaning	1995
SSPC-SP6	Commercial Blast Cleaning	1994
SSPC-SP7	Brush-Off Blast Cleaning	1994
SSPC-SP10	Near-White Blast Cleaning	1994
SSPC-SP11	Power Tool Cleaning to Bare Metal	1995

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L.6 52.233-2 SERVICE OF PROTEST (AUG 1996) DEPARTMENT OF INTERIOR
(JUL 1996) (DEVIATION)

(a) Protests as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from: Contracting Officer, Bureau of Reclamation, P.O. Box 61470, Boulder City NV 89006-1470.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(c) A copy of the protest served on the Contracting Officer shall be simultaneously furnished by the protester to the Department of Interior Assistant Solicitor for Procurement and Patents, 1849 C Street, NW, Room 6511, Washington, D.C. 20240.

L.7 52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) Site visits may be arranged during normal duty hours by contacting:

Mr. Donald Bader
Bureau of Reclamation
Lower Colorado Dams Facilities Office
P.O. Box 60400
Boulder City NV 89006-0400
Telephone No. **702**-293-8248

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L.8 52.252-5 AUTHORIZED DEVIATIONS IN PROVISIONS (APR 1984)

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any Department of Interior Acquisition Regulation (48 CFR Chapter 14) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

L.9 WBR 1452.211-80 NOTICE OF INTENT TO ACQUIRE METRIC PRODUCTS AND SERVICES--BUREAU OF RECLAMATION (MAR 1993)

(a) Metric Transition Plan. The Department of the Interior on December 6, 1991, issued a Metric Transition Program (Part 758 Department Manual Chapter 1) to establish and describe the program's policies and responsibilities. The Bureau of Reclamation (Reclamation), has developed a Metric Transition Plan to implement metrication in Reclamation. This plan describes Reclamation's overall strategy for using the metric system, defines general requirements and procedures for carrying out the transition, and details the tasks with milestones for Reclamation offices to complete.

(b) The Omnibus Trade and Competitiveness Act of 1988 (Trade Act).

(1) Section 5164 of Public Law 100-418, the Trade Act, amended the Metric Conversion Act of 1975 and designated the metric system of weights and measures for United States trade and commerce.

(2) The Trade Act establishes September 30, 1992, as the implementation date (to the extent economically feasible) for Federal agencies to use the metric system of measurement in its procurements, grants, and other business-related activities.

(3) The Trade Act permits exceptions to the use of the metric system to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms, such as when foreign competitors are producing competing products in non-metric units.

(4) As a result of the Trade Act, the President issued Executive Order 12770 dated July 25, 1991, to implement the congressional designation of the metric system as the preferred system of weights and measures for United States trade and commerce.

(c) Bureau of Reclamation Implementation. As a result of the Trade Act, Reclamation will, to the maximum extent practicable, use hard conversion and soft conversion metric systems in designing its construction projects, eventually phasing out use of the soft conversion metric system. Exceptions to this policy will only be made when such use is impractical, produces inefficiencies or market losses, or is not economically feasible.

(d) Expected Results. Reclamation expects its support of the metric system to result in increased use of the metric system by U.S. contractors, thereby increasing their ability to compete in the international marketplace. Increasing use of the metric system by U.S. contractors will eliminate possible restrictions on their bidding in the international marketplace and will eliminate any impact of economic blocks by metric countries restricting the acceptance of non-metric products.

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h. Payment. - Payment for furnishing and erecting structural steel will be made at the lump-sum price bid therefor in the schedule, which price shall include the cost of verifying existing field conditions and the designing, furnishing, installing and removing of the temporary shoring.

The cost of removing the existing structural steel is provided for in paragraph 2.1.1 (Removal of Existing Concrete and Steel Materials).

SECTION 4.2 - FABRICATED METALWORK

4.2.1 MISCELLANEOUS METALWORK

a. General. - The Contractor shall perform the following items of work:

- (1) Furnish and install new covers and modify existing grating as shown on drawing 19 (45-D-19436).

Removal and disposal of the existing metalwork associated with item (1) above shall be in accordance with paragraph 2.1.1 (Removal of Existing Concrete and Steel Materials).

Existing anchors and anchor holes shall not be used for installing new metalwork. Existing anchor bolts and expansion anchors shall be clipped flush with the concrete surface.

b. Materials. -

- (1) Structural steel. - ASTM A 36.
- (2) Grating. - Banding bars shall be the size shown on the drawings. Where safety grating is called for on the drawings, serrated-edge grating shall be used.
- (3) Steel pipe. - ASTM A 53, type E or S, grade B. Pipe shall be standard-weight, black, steel pipe.
- (4) Steel bolts. - ASTM A 307, except stud bolts. Stud bolts shall be suitable for end welding to steel with automatically timed stud-welding equipment.
- (5) Steel nuts. - ASTM A 563.
- (6) Steel washers. - ASTM F 844.
- (7) Screws. - Federal Specification FF-S-85.
- (8) Arc-welding electrodes. - All filler metal and required shielding gases or fluxes shall be in accordance with the requirements of the AWS D1.1 "Structural Welding Code - Steel". Filler metal shall have a minimum tensile strength of 70,000 psi.

(9) Steel floor plate. - ASTM A 786, pattern 1, 2, 3, or 4, with material conforming to ASTM A 36.

(10) Stainless steel expansion anchors. - Commercial Item Description A-A-1923A, type 4. Expansion anchors shall be stainless steel type 304. Where the length of bolt or minimum embedment is not indicated, the bolt length shall provide a 3-1/2-inch minimum embedment.

(12) Stainless steel bolts and threaded anchors. - ASTM F 593, type 304. Threaded anchors shall be threaded full length.

(13) Stainless steel nuts. - ASTM F 594, type 304.

(14) Stainless steel washers. - Stainless steel type 304.

(15) Neoprene washers. - Neoprene washers shall be standard commercial sealing washers bonded with stainless steel washers.

(16) Epoxy grout. - Epoxy grout materials shall be a 100-percent solids, two-component, epoxy adhesive meeting the requirements of ASTM C 181, type IV, grade 3, class B or C and shall be formulated for the environmental conditions at the worksite.

Epoxy grout materials shall be delivered and stored in the manufacturer's original unopened packaging with seals and labels intact. Epoxy grout materials shall be stored in accordance with the manufacturer's instructions.

c. Fabrication. - All work shall be equal to the best modern practice in the manufacture and fabrication of materials of the type covered by these specifications, notwithstanding any omissions from these specifications or drawings. Fabrication of metalwork shall be in accordance with AISC's "Manual of Steel Construction - Allowable Stress Design," and the requirements of these specifications. Welding and work related thereto shall be performed in accordance with the requirements of the AWS D1.1 "Structural Welding Code - Steel". Material shall be straight and free from sharp kinks and bends before being laid off or worked.

After fabrication, all materials shall be straight and true and free from kinks, twists, or warps. If straightening is necessary, it shall be done by methods that will not injure the metal.

d. Installation. - The Contractor shall use diamond bits to drill all holes in concrete required for the installation of expansion anchors and epoxy grouted anchors, in order to achieve straight and true holes. Holes shall be roughened in accordance with the anchor manufacturer's requirements before installation of the anchors.

Holes for epoxy grouted anchors shall be cleaned and prepared in accordance with the grout manufacturer's instructions. Anchor holes shall be the diameter recommended by the epoxy grout manufacturer. Dust and standing water shall be removed from the hole. Surfaces of anchor bolts to be embedded in epoxy grout shall be cleaned and prepared in accordance with the grout manufacturer's instructions.

Epoxy grout shall be mixed and installed in accordance with the manufacturer's instructions. Excess grout shall be cleaned from the exposed end of the anchor bolts.

Grouting mortar shall be furnished and placed where shown on the drawings in accordance with the requirements of paragraph 3.1.1 (Grouting Mortar For Equipment and Metalwork).

e. Painting. - Painting or coating of new and existing metalwork, except stainless steel and items otherwise noted on the drawings, shall be in accordance with paragraph 6.1.1 (Painting and Coating, General). After installation of the metalwork, damaged areas of painted surfaces shall be repaired in accordance with paragraph 6.1.1 (Painting and Coating, General).

f. Measurement and payment. - Measurement for payment for furnishing and installing miscellaneous metalwork will be made of the total weight of the new metalwork furnished and installed, including nonmetallic materials as specified.

Payment for furnishing and installing new miscellaneous metalwork will be made at the unit prices per pound bid therefor in the schedule, which prices shall include the cost of modifying existing metalwork where applicable.

Payment for painting or coating existing metalwork will be made at the lump-sum price bid therefor in the schedule.

The cost of removing and disposing of existing miscellaneous metalwork is provided for in paragraph 2.1.1 (Removal of Existing Concrete and Steel Materials).

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DIVISION 7 - DRAWINGS

SECTION 7.1 - DRAWINGS

7.1.1 DRAWINGS, GENERAL

a. General. - Some of the drawings included herein show details of fabrication, and other details and specifications not a part of work required under these specifications. Specifications and details shown on these drawings which are not applicable under these specifications shall be disregarded. Reference drawings referred to on specifications drawings, and not included herein, are not considered necessary for bidding purposes but will be furnished to the Contractor, where necessary, for construction purposes.) Where details shown on standard drawings 40-D- and 104-D- series differ from those shown on other drawings or the requirements of these specifications, the details shown on other drawings or the requirements of these specifications shall govern.

In accordance with the clause entitled "Specifications and Drawings for Construction," the Contractor shall advise the Contracting Officer of any discrepancies including errors or omissions discovered on any of the drawings.

b. Additional or revised drawings. - Except as otherwise provided in these specifications for drawings to be furnished by the Contractor, these specifications drawings will be supplemented by such additional or revised general and detail drawings as may be necessary or desirable as the work progresses; and the Contractor shall do no work without proper drawings and instructions. The additional or revised general and detail drawings furnished by the Government will show dimensions and details necessary for construction purposes more completely than are shown on these specifications drawings for all features of the work.

c. Additional copies of drawings. - The Contractor will be furnished such additional copies of these specifications and drawings as may be required for carrying out the work. Full-size prints of the original drawings from which the attached reproductions were made, other than standard drawings 40-D- and 104-D- series, will be furnished to the Contractor for construction purposes upon request. Additional prints of the standard drawings 40-D- and 104-D- series of the size included herein (approximately half-size) will be furnished upon request. The number of full-size prints of each drawing furnished to the Contractor will be limited to 10 prints and 1 reproducible.

d. Informational drawings. - Some of the drawings included herein are marked for "information only" in the drawing list, and are intended to show some feature about which additional knowledge is required for bidding and design. Dimensions have not been checked or compared with actual figures to verify accuracy. To the extent that correct information is required for a bidder to determine a bid price, bidders are advised to verify accuracy and are required to measure for themselves.

e. Mailing address. - All drawings and data submitted by the Contractor for which a specific mailing address is not given in these specifications shall be submitted to the Construction Engineer at the address listed in subparagraph 1.1.3.e (Submittal Requirements).

7.1.2 LIST OF DRAWINGS

The following drawings are made a part of these specifications:

Hoover Powerplant
Boulder Canyon Project
Arizona and Nevada

Location Map:

1. 45-301-6681 - Location Map

General plan:

2. 45-D-19455 - General Plan

Central Section Powerhouse:

3. 45-D-4601 - Central Portion - Plan at Elev. 620+ - Floor Elev. 616.0
4. 45-D-14290 - Central Portion Location C2-C3 - Supply and Control Piping for 24-inch Jet Pumps
5. 45-D-14228 - Central Portion - Location C2-C3 - Piping Details - 24" Jet Pumps for Main Sump - Supply and Discharge Lines
6. 45-D-8463 - Piping - Details - 3" x 6" Eductor Piping - Main Sump - Central Portion
7. 45-D-8462 - Piping Details - Tail Pipes and Float Chambers in Main Sumps - Central Portions
8. 45-D-14242 - Central Portion - Location C2-C3 - Structural Steel - Floor Slab Reinforcement - Assembly - Details
9. 45-D-19406. - Piping, Valves, and Eductors - Plan, Sections, and Detail
10. 45-D-19407. - Piping, Valves, and Eductors - Sections and Details
11. 45-D-19408. - Piping, Valves, and Eductors - Plan and Sections
12. 45-D-19409. - Piping, Valves, and Eductors - Sections and Details
13. 45-D-19410. - Piping, Valves, and Eductors - Anchors
14. 45-D-19411. - Piping, Valves, and Eductors - Eductor Operating Conditions
15. 45-D-19412. - Eductor Controls - Pneumatic Schematic Diagram
16. 45-D-19413. - Eductor Controls - Installation - List of Parts - Detailed Parts
17. 45-D-19414. - Piping Details - Tail Pipes in Main Sump - Central Portions
18. 45-D-19438. - Central Portion - Location C-2 and C-3 - Structural Steel - Support Beams for Floor Slab

Miscellaneous Metalwork:

19. 45-D-19436 - Miscellaneous Metalwork - Gratings and Covers

Standard Drawings

20. 40-D-4335 - Electrical Standards - Typical Grounding Details - Sheet 2
21. 40-D-6234 - Standard Nameplates
22. 40-D-6248 - Flange Support

% Informational Drawing:

%

%

%

23. 45-D-14229 - Piping Details Hangers

7.1.3 DRAWING NUMBERS IN NUMERICAL ORDER

%	Drawing	Sheet No.
	45- D-	
	45- D- 4601	3
	45- D- 8462	7
	45- D- 8463	6
	45- D- 14228	5
	45- D- 14229	23
	45- D- 14242	8
	45- D- 14290	4
	45- D- 19406	9
	45- D- 19407	10
	45- D- 19408	11
	45- D- 19409	12
	45- D- 19410	13
	45- D- 19411	14
	45- D- 19412	15
	45- D- 19413	16
	45- D- 19414	17
	45- D- 19436	19
	45- D- 19438	18
	45- D- 19455	2
	45- 301	
	45- 301- 6681	1
	40- D-	
	40- D- 4335	20
	40- D- 6234	21
	40- D- 6248	22